

### REMARKS

This Application has been carefully reviewed in light of the Office Action mailed May 27, 2010. At the time of the Office Action, Claims 12-29 were pending in this Application, and Claims 1-11 were previously cancelled without prejudice or disclaimer. All pending Claims 12-29 were rejected in the Office Action. Independent Claims 12 and 22 are herein amended. Applicant respectfully requests reconsideration and allowance of all pending claims.

#### **Rejections under 35 U.S.C. § 101**

Claims 12-29 were rejected by the Examiner under 35 U.S.C. §101. Applicant has amended independent claim 12 to explicitly tie the method to an article of manufacture -- i.e., "said method embodied as computer program instructions encoded in tangible computer readable media." This amendment is supported in the specification, e.g., at paragraphs 0037 and 0049 of the Printed Publication No. US 2005/0033757.

Further, Applicant has amended independent claim 22 to recite computer readable media encoded with the computer program modules that provide the various recited functionality -- i.e., "An automatic language recognizing apparatus, including computer program modules encoded in tangible computer readable media..." (see MPEP 2106.01(I): "In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.")

Thus, Applicant submits that amended independent claims 12 and 22 comply with 35 U.S.C. §101, and therefore respectfully request that these rejections be withdrawn.

#### **Amended Independent Claims 12 and 22 are Allowable.**

Independent Claims 12 and 22 were rejected under 35 U.S.C. §103(a) as being unpatentable over *D'hoore* (U.S. Patent No. 6,085,160) in view of *Riis* (U.S. Patent Application Publication No. 2003/0050779) and further in view of *Fabiani* (U.S. Patent Application Publication No. 2002/0173945).

Although Applicant does not agree with these rejections, Applicant has amended independent Claims 12 and 22 to further and more clearly distinguish from the cited references. For example, amended independent Claim 12 recites in part:

(b) for each of a plurality of words, determining phonetic transcripts for the word for  $N$  various languages not specified as the mother tongue to generate  $N$  first phoneme sequences for the word corresponding to  $N$  first pronunciation variants, **each of the  $N$  first phoneme sequences formed from phonemes associated with one of the  $N$  different languages;**

(c) determining a phoneme map by mapping the generated first phoneme sequences of each of said  $N$  languages to a relevant phoneme set of the mother tongue;

(d) for each of the plurality of words, applying the phoneme map to each of the  $N$  first phoneme sequences for that word in order to **translate the  $N$  first phoneme sequences into  $N$  second phoneme sequences, each of the  $N$  second phoneme sequences formed from phonemes associated with the mother tongue language,**

such that **for each word, two different phonetic transcripts are generated for each of the  $N$  different languages,** including (1) the  $N$  first phoneme sequences for the word, each formed from **phonemes associated with one of the  $N$  different languages,** and (2) the  $N$  second phoneme sequences for the word, each formed by **applying the phoneme map to translate one of the  $N$  first phoneme sequences formed from phonemes associated with one of the  $N$  different languages into a sequence of phonemes associated with the mother tongue language;** and

(e) processing said  $N$  second phoneme sequences with the phoneme set associated with the language specified as the mother tongue to identify at least one of a matching word and a similar word.

Applicant respectfully submits that *D'hoore*, *Riis*, and *Fabiani* fail to teach these limitations. For example, none of *D'hoore*, *Riis*, and *Fabiani* teach applying a phoneme map (that maps phonemes of  $N$  languages to phonemes of a mother tongue language) in order to **translate multiple phoneme sequences of different (non-mother tongue) languages into multiple phoneme sequences of a mother tongue language.**

The Examiner acknowledges that *D'hoore* does not teach determining a phoneme map by mapping the phoneme sequences of  $N$  non-mother tongue languages to a relevant

phoneme set of a mother tongue language, or determining second phoneme sequences corresponding to *N* second pronunciation variants from said phoneme map for each word. (Office Action, page 5). However, the Examiner alleges that *Fabiani* teaches the use of phoneme mapping, and *Riis* teaches “capturing both inter- and intra-language pronunciation variation which is ideal for multilingual speaker independent speech recognition systems,” and that these teachings, in combination with *D’hoore*, render claims 12 obvious (Office Action, pages 5-6).

Applicant does not agree with the Examiner’s position. However, even assuming *arguendo* that the Examiner’s interpretation of *Fabiani* is correct, it still fails to teach applying a phoneme map (that maps phonemes of *N* languages to phonemes of a mother tongue language) in order to **translate phoneme sequences from *N* different (non-mother tongue) languages into corresponding phoneme sequences of a mother tongue language**, as explicitly recited in amended claim 12. As discussed above, the Examiner alleges that *Fabiani* teaches the use of phoneme mapping. However, the mapping taught by *Fabiani* is different than the claimed phoneme mapping and translation recited in amended claim 12. *Fabiani* teaches the mapping of phoneme transcriptions of a first language to phoneme transcriptions of each of a set (“collection”) of other languages for which a speech model is provided in the speech processing device. (paragraph 0050, lines 1-8). However, unlike Applicant’s recited invention, *Fabiani*’s technique *actually translates* a phoneme transcription using such mappings only when the speech processing device does not include a speech model for the language of the (pre-translated) phoneme transcription:

... This is particularly useful if a sub-transcription unit of a language in the first sub-group does not exist in the collection of reference sub-transcription units and a specific speech model is thus not available. In a typical interaction, a transcription sub-transcription is processed to determine whether each sub-transcription unit thereof has a speech model available in the collection of reference sub-transcription units. In the affirmative, the transcription is released unmodified. In the negative, the sub-transcription unit(s) that does not have a speech model available in the collection of reference sub-transcription units is processed to derive a substitute sub-transcription unit from the collection of reference sub-transcription units that is acoustically similar to the sub-transcription unit(s) that does not have a speech model available. The sub-transcription unit(s) that does not have a speech model available is then replaced in the

transcription by the substitute sub-transcription unit(s). The modified transcription is then released.

(paragraph 0050, lines 11-28).

Further, each phoneme transcription that must be translated (because no corresponding speech model is present) is translated into the language having the *most acoustically similar* phoneme transcription, using *Fabiani*'s "nearest phoneme method." (paragraph 0050, lines 28-41).

In contrast, in the claimed invention, the phoneme map (that maps phonemes of  $N$  different languages to phonemes of a mother tongue language) is used to translate phoneme sequences from **each of the  $N$  different (non-mother tongue) languages into phoneme sequences of a mother tongue language**. Thus, unlike in *Fabiani*, whether or not the mobile telephone or other relevant device includes a speech model for each of the  $N$  different (non-mother tongue) languages is not a relevant factor -- instead, *each of the  $N$  different phoneme sequences is translated* using the phoneme map. Further, all of the  $N$  different phoneme sequences are translated *to the mother tongue language, regardless of whether the phoneme sequences of the mother tongue are the most acoustically similar to each of the phoneme sequences to be translated*. In contrast, in *Fabiani*, each phoneme sequence that is actually translated (which is only the subset for which no corresponding speech model exists) is translated to the most acoustically similar language for each respective language, not to a common "mother tongue" language.

In addition, *Riis* and *D'hoore* also fail to teach these limitations of amended claim 12.

Further, with respect to amended claim 12, none of *D'hoore*, *Riis*, and *Fabiani* teach:

such that **for each word, two different phonetic transcripts are generated for each of the  $N$  different languages**, including (1) the  $N$  first phoneme sequences for the word, each formed from **phonemes associated with one of the  $N$  different languages**, and (2) the  $N$  second phoneme sequences for the word, each formed by **applying the phoneme map to translate one of the  $N$  first phoneme sequences formed from phonemes associated with one of the  $N$  different languages into a sequence of phonemes associated with the mother tongue language**;

None of *D'hoore*, *Riis*, and *Fabiani* teach *generating, for each word, two different phonetic transcripts for each of N different languages*, much less the two specific phonetic transcripts as recited. If the Examiner believe that any of *D'hoore*, *Riis*, or *Fabiani* does teach these specific features, Applicant requests that the Examiner indicate the exact lines that allegedly teach these features.

For at least these reasons, Applicant submits that amended claim 12 is allowable over *D'hoore*, *Riis*, and *Fabiani*.

In addition, Applicant maintains its position from Applicant's October 21, 2009 Pre-Appeal that the proposed combination of *D'hoore* with *Riis* is legally improper, and further submit that the proposed combination of *D'hoore*, *Riis*, and *Fabiani* is also improper for at least the same reasons.

Thus, for at least the reasons set forth above, Applicant respectfully requests allowance of amended independent Claims 12 and 22, as well as all claims that depend therefrom.

**All Dependent Claims are Allowable.**

Dependent Claims 12-13, 20-21 and 28-29 were rejected under 35 U.S.C. §103(a) as being unpatentable over *D'hoore* in view of *Riis* and further in view of *Fabiani*.

Dependent Claims 14-16 and 23 were rejected under 35 U.S.C. §103(a) over of *D'hoore* in view of *Riis*, further in view of *Fabiani* and further in view of *Bub* (U.S. Patent No. 6,460,017).

Dependent Claims 17 and 24-25 were rejected under 35 U.S.C. §103(a) over of *D'hoore* in view of *Riis*, further in view of *Fabiani*, further in view of *Bub* and further in view of *Brill* (U.S. Patent No. 7,047,493)

Dependent Claims 18-19 and 26-27 were rejected under 35 U.S.C. §103(a) over of *D'hoore* in view of *Riis*, further in view of *Fabiani* and further in view of *Harengel* (U.S. Patent Application Publication No. 2004/0039570).

Applicant submits that all dependent claims are allowable at least because they depend from the independent claims shown above to be allowable. Further, *Bub*, *Brill*, and *Harengel* do not teach the features of the independent claims not taught by *D'hoore*, *Riis*, and *Fabiani*. Further, Applicant does not concede that any of the proposed combinations of references are legally proper. Thus, for at least these reasons, Applicant respectfully requests reconsideration and allowance of all pending dependent claims.

**CONCLUSION**

Applicant has made an earnest effort to place this case in condition for allowance in light of the remarks set forth above. Applicant respectfully requests reconsideration of the pending claims.

Applicant respectfully submits a Petition for One-Month Extension of Time. The Commissioner is authorized to charge the fee of \$130.00 required to Deposit Account 50-4871 in order to effectuate this filing.

Applicant believes there are no other fees due at this time. However, the Commissioner is hereby authorized to charge any fees necessary or credit any overpayment to Deposit Account No. 50-4871 of King & Spalding L.L.P.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicant's attorney at 512.457.2030.

Respectfully submitted,  
KING & SPALDING L.L.P.  
Attorney for Applicant



Eric M. Grabski  
Registration No. 51,749

Date: 8/31/10

SEND CORRESPONDENCE TO:  
KING & SPALDING L.L.P.  
CUSTOMER ACCOUNT NO. **86528**  
512.457.2030  
512.457.2100 (fax)